

# **NASA’s Global Change Master Directory (GCMD)** **docBUILDER-10 Metadata Authoring Tool User Guide**

*Version 1.0*

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## **Overview**

docBUILDER-10 is a web-based metadata authoring tool that allows metadata authors to add (or modify) data set descriptions (DIFs) that comply with the Common Metadata Repository (CMR) Unified Metadata Model for Collections (UMM-C). The tool also allows metadata authors to validate and submit their DIFs directly to the CMR. docBUILDER-10 writes metadata to the new DIF-10 format. For more information on the Common Metadata Repository (CMR) and the Unified Metadata Model for Collections (UMM-C), visit <https://earthdata.nasa.gov/cmr>.

## **Start a New Metadata Record**

- To create a new DIF record:
  - Click “Create a New Record” and enter a record Entry ID (Short Name and Version). If you intend to begin a single entry, set the template to "No Template" (opens up a blank record that can be written from scratch). To begin a record containing common information (ex: provider, personnel/contact information, project, etc.) and already have a template file containing this common

information, select the template from the drop-down list. For more information on templates, please see the “Working with Templates” section below.

- Select “Continue” to proceed to create a new record. Please note: You may retrieve your record at any time in the future using the Entry ID.

The screenshot shows a web form with two main options: "Create a new record" (selected with a radio button) and "Modify an existing record" (unselected). Below these options is a "CONTINUE »" button. To the right, there is a section titled "Please enter Record Entry ID: (What is an [Entry ID?](#))". This section contains two input fields: "Short Name:" and "Version:". Below these fields is a message: "If you would like to use an existing template, Please select a template from the menu below:". This message is followed by a dropdown menu currently showing "No template" and a link labeled "What is a template?".

## Modify an Existing Metadata Record

- To modify an existing DIF record:
  - Choose “Modify an existing record” and select from the three options:
    1. “Upload record from desktop”: Choose a record that has been saved locally.
    2. “Update existing record from CMR”: Provide a record Entry ID that already exist in the Common Metadata Repository (CMR).
    3. “Edit draft record”: Provide a record Entry ID for a record that is still in work and has not been submitted to the CMR.
- Select “Continue” to proceed to authoring the existing record.

☐ Create a new record  
 or  
☒ Modify an existing record

Choose one of the options

☐ Upload record from desktop  
 Browse... No file selected.  
 Upload File

☐ Update existing record from CMR  
 Please enter Record Entry ID:

☐ Edit unsubmitted record  
 Please enter Record Entry ID:

CONTINUE >>

## Authoring a Metadata Record

- Create a new record or update an existing record by populating information in the fields.
  - Note the fields that are Required (12), Highly Recommended (10), and Recommended (13). Users are encouraged to populate as many field as possible to ensure a complete and comprehensive metadata record.
- Field Information:
  - A clear circle indicates that the field has not been validated and is incomplete.
  - A green circle indicates that the field passed validation and is complete.
  - A half-clear and half-green circle indicates that the field partially passed validation and is incomplete.
  - An X in the circle indicates that the field has failed validation.
  - As you select each field and author the record, the circles will change to green if they are complete and pass validation.
  - Several sub-fields have in-line validation that will automatically validate the field and give a validation error messages if there are errors.

- The “i” to the right of each field provides specific information about a given field (ex: recommendations, syntax and examples).

Required fields (12 of 12 pass)	Highly Recommended fields (0 of 10 pass)	Recommended fields (0 of 13 pass)
<input checked="" type="checkbox"/> Entry ID	<input type="checkbox"/> Dataset Citation	<input type="checkbox"/> Originating Center
<input checked="" type="checkbox"/> Entry Title	<input type="checkbox"/> Personnel	<input type="checkbox"/> Multimedia Sample
<input checked="" type="checkbox"/> Science Keywords	<input type="checkbox"/> Location	<input type="checkbox"/> Metadata Association
<input checked="" type="checkbox"/> ISO Topic Category	<input type="checkbox"/> Data Resolution	<input type="checkbox"/> IDN Node
<input checked="" type="checkbox"/> Organization	<input type="checkbox"/> Quality	<input type="checkbox"/> DIF Revision History
<input checked="" type="checkbox"/> Summary	<input type="checkbox"/> Access Constraints	<input type="checkbox"/> Version Description
<input checked="" type="checkbox"/> Related URL	<input type="checkbox"/> Use Constraints	<input type="checkbox"/> Additional Attributes
<input checked="" type="checkbox"/> Platform/Instrument	<input type="checkbox"/> Distribution Information	<input type="checkbox"/> Product Level Id
<input checked="" type="checkbox"/> Temporal Coverage	<input type="checkbox"/> Dataset Progress	<input type="checkbox"/> Collection Data Type
<input checked="" type="checkbox"/> Spatial Coverage	<input type="checkbox"/> Dataset Language	<input type="checkbox"/> Extended Metadata
<input checked="" type="checkbox"/> Project		<input type="checkbox"/> Ancillary Keyword
<input checked="" type="checkbox"/> Metadata Dates		<input type="checkbox"/> Publication/Reference
		<input type="checkbox"/> Privacy Status

Legend: = Description of field    ☐ = Field not validated    ☒ = Passes Validation    ☒ = Partially Passes Validation    = Fails Validation

#### Field Menu:

- “Select Record”: Return to start to create or modify a different record.
- “View All Fields”: View all fields in the metadata record.
- “Edit Field > Previous Field”: Save your edits in the field and go to the previous field in the metadata record.
- “Edit Field > Next Field”: Save your edits in the field and go to the next field in the metadata record.
- “Save this field now”: Save your edits.
- “Reset this field”: Clear your edits.

Select Record

View All Fields

Edit Field

Submit to CMR (SIT)

Previous Field

Next Field

- Some fields and sub-fields are repeatable. A green button allows you to insert additional entries. A red button allows you to delete all of the information in the field.
- Some fields allow you to type in information of your choice (ex: Entry ID, Entry Title, Quality, and Summary).
- Fields with large blocks of text (ex: Summary, Quality, Access Constraints, etc.) support Markdown syntax. For information about using Markdown, see <http://daringfireball.net/projects/markdown/>
- Some fields allow you to select a keyword from a pre-defined enumerations list (ex: Data Set Progress, Collection Data Type).

- Other fields allow you to select from a list of existing controlled keywords (ex: Science Keywords, Organization, Platform/Instrument, Location and Project).
- The record is automatically saved. If you want to see/edit the XML formatted metadata, click “View XML Editor” and the XML will appear in the lower portion of the authoring window. Please note: You do not have to complete the metadata record by populating the XML in the window of the main panel. The text in this window can be edited at any time (just remember to select the “Save Edits in Text Box” button anytime you update information in that box, or your information will not be saved).

## Selecting Keywords

- To narrow the list of keywords, begin typing the keyword you want to locate.
- Select the keyword or multiple keywords (if applicable).
- You can select the keyword again to remove it from the list.
- If you would like to add a new keyword, you must check that the addition complies with the GCMD Science Keyword Rules and the GCMD science staff will review it, prior to inserting it into the CMR.

**Science Keywords** ⓘ : Select science keywords that describe the data set.

Select a Keyword Topic (from the upper box) to view only that Topic's subset of keywords in the lower box.

**ALL**

AGRICULTURE  
ATMOSPHERE  
BIOLOGICAL CLASSIFICATION  
BIOSPHERE  
CLIMATE INDICATORS

**Search the list:**

AGRICULTURE > AGRICULTURAL AQUATIC SCIENCES  
AGRICULTURE > AGRICULTURAL AQUATIC SCIENCES > AQUACULTURE  
AGRICULTURE > AGRICULTURAL AQUATIC SCIENCES > FISHERIES  
AGRICULTURE > AGRICULTURAL CHEMICALS  
AGRICULTURE > AGRICULTURAL CHEMICALS > FERTILIZERS  
AGRICULTURE > AGRICULTURAL CHEMICALS > PESTICIDES  
AGRICULTURE > AGRICULTURAL ENGINEERING  
AGRICULTURE > AGRICULTURAL ENGINEERING > AGRICULTURAL EQUIPMENT  
AGRICULTURE > AGRICULTURAL ENGINEERING > FARM STRUCTURES  
AGRICULTURE > AGRICULTURAL PLANT SCIENCE  
AGRICULTURE > AGRICULTURAL PLANT SCIENCE > CROP/PLANT YIELDS  
AGRICULTURE > AGRICULTURAL PLANT SCIENCE > CROPPING SYSTEMS  
AGRICULTURE > AGRICULTURAL PLANT SCIENCE > IRRIGATION  
AGRICULTURE > AGRICULTURAL PLANT SCIENCE > PLANT BREEDING AND GENETICS  
AGRICULTURE > AGRICULTURAL PLANT SCIENCE > PLANT DISEASES/DISORDERS/PESTS

[Deselect Highlighted Items?](#)

To add uncontrolled Science Keywords, [append detailed variables](#) to the selected keyword set(s) from the list above.  
To add or modify a "controlled" keyword, please follow the [Procedures for GCMD Keyword Modification](#).

## Selecting Personnel

- The personnel field defines a point of contact for more information about the data and metadata.
- In Personnel, you can select the role of an Investigator, Technical Contact, and/or Metadata Author.
- The easiest way to populate this field is to select the “Role” from the drop-down box, then select the “Lookup” button to search for the person to add.

- If you find the contact in the “Personnel Lookup” window, click the contact to highlight it, and then select “Accept”. The information will be automatically populated in the window.
- You can also search for the name by typing in the “Search” box.
- If you do not find the person in the list, select “Add new Personnel to List” to add a new Personnel. Please note that not all of the information within the field is required, but minimally, a last name is needed).

## Selecting an Organization

The screenshot shows two overlapping windows. The background window is the main application interface for adding personnel. It has a legend on the left with icons for adding, removing, required, and recommended fields. The main form has fields for First Name (GEOGRAPHIC INFORMATION SYSTEMS), Middle Name, Last Name (GIS LABS), Address, Phone, and Email. There are buttons for 'Contact\_Person' and 'Contact\_Group'. The foreground window is the 'Personnel Lookup' dialog. It has a search box with 'Steven' entered. Below the search box is a table with columns 'First Name', 'Middle Name', and 'Last Name'. The table contains several rows of names. The row 'STEVEN WILLIAM BARWICK' is highlighted. Below the table are buttons for 'Show Selected Person's Full Info', 'Accept', and 'Cancel'. At the bottom of the dialog is a text area showing XML data for the selected person.

First Name	Middle Name	Last Name
STEVEN	A.	ARCONE
STEVEN, DR.		BABIN
STEVEN	L.	BAIRD
STEVEN	WILLIAM	BARWICK
STEVEN		BAUGHUM
STEVEN		BROOKS
STEVEN		BUSINGER

```
<Contact_Person>
<First_Name>STEVEN</First_Name>
<Middle_Name>WILLIAM</Middle_Name>
<Last_Name>BARWICK</Last_Name>
<Address>
<Street_Address>University of California</Street_Address>
<City>Irvine</City>
<State_Province>CA</State_Province>
<Postal_Code>92697</Postal_Code>
<Country>USA</Country>
</Address>
</Contact_Person>
```

- The Organization field identifies the organization (data center) that distributes, archives, and/or processes the data.
- Select the “Organization Type” from the drop-down box.
- To populate the Organization field, select the “Lookup” button to check if the Organization is within the existing list.
  - If you find the Organization in the list, select “Accept”. The information will be populated in the window automatically.
  - If you do not find the Organization in the list, select the “Add New Organization to List” button.
    - Next, supply a name and website for the organization
    - Select “Accept” to add the new organization. The information will be automatically populated in the window.
- Please note that the Organization field is repeatable and that you can add another Organization by selecting the green button.

**Organization**

Indicate the organization(s) or institution(s) responsible for distributing the data.

Legend:

- Click to add another (new) field
- Click to remove this field
- Required field
- Highly recommended field

Organization Type **ARCHIVER**  Describes the Type

**Organization Name**

Short Name

Long Name

Hours Of Service

Instructions

Organization URL

Dataset ID

**Organization**

Search:

Category	Short Name	Long Name	Web Address
GOVERNMENT AGENCIES-U...	NASA/ARC/ESD/SGE	Ecosystem Science and Tec...	http://geo.arc.nasa...
GOVERNMENT AGENCIES-U...	NASA/ARC/LT/WW	World Wind, Learning Tech...	http://worldwind.arc...
GOVERNMENT AGENCIES-U...	NASA/ARC/LT	Learning Technologies, Am...	http://learn.arc.nasa...
GOVERNMENT AGENCIES-U...	NASA/ARC/MAS	MODIS Airborne Simulator ...	http://mas.arc.nasa...
GOVERNMENT AGENCIES-U...	NASA/ARC/OSS	Open Source Software, Am...	http://opensource.a...
GOVERNMENT AGENCIES-U...	NASA/ARC/SOFIA/EPO	Education and Public Outre...	http://www.sofia.us...
GOVERNMENT AGENCIES-U...	NASA/EDU/CORE	Central Operation of Resou...	http://core.nasa.gov...
GOVERNMENT AGENCIES-U...	NASA/EDU/SL/ERCN	Educator Resource Center ...	http://spacelink.nasa...
GOVERNMENT AGENCIES-U...	NASA/EDU/SL	Space Link, Education Divisi...	http://spacelink.nasa...
GOVERNMENT AGENCIES-U...	NASA/GSFC/AAAB	Advanced Architecture and...	http://aaaproduct.gsfc...
GOVERNMENT AGENCIES-U...	NASA/GSFC/EOS/CARSTAD	Center for Airborne Remot...	http://carstad.gsfc.j...

## Submitting Metadata to the CMR

After creating or updating a metadata record, you are advised to review the quality of the metadata before submitting to the CMR.

- Check the metadata record for errors and/or broken links by clicking “Generate QA Report” and/or “Check for Broken Links” under the “Check Record” menu.
- A new window will popup showing any errors, warnings, potential broken links, and/or other important notes about the quality of the metadata record. For more information on this feature, click the “Help” button in the window.
- Close the window to return to the metadata authoring tool.
- After making any changes to the metadata record, select “Submit to CMR” to send the record to the CMR. You will need to provide a valid email address.
  - You will get a message that indicates the status of the metadata submission to the CMR.
  - You will also get an email indicating that your record has been successfully submitted.
- Select “Return to start” to close the current record and start a new one.

## Working with Templates

- You may choose to create a template when creating multiple DIFs that have repeatable information in a set of fields. If you intend to write DIFs that have several of the same or common information such as provider, contact information, etc., then it would be helpful to use a template.
- To begin a template:
  - Select “Create a new record”.
  - Enter a record entry id.
  - Select “No template” under the Template option.
  - Select “Continue” to start authoring the template.
  - Enter the pertinent information that may be repeated in a group of DIFs (ex: Provider, Personnel, Project, etc.).
  - Select “Record > Save As Template”. Next, give the template a file name (ex: GSFC Template) and select OK.
  - Select “Select Record > Create New Record” to close the current record and start a new one.
  - To use the template for the DIFs you intend to write,
    - Select “Create a new record”
    - Enter a record identifier
    - Choose the template from the drop-down.
    - Select “Continue” to start authoring the record. Note that the record will be pre-populated with the information that you provided in the template.

## Menu Options

### Top Navigation

**Select Record:** Return to the start page to create or modify a different record.

**View All Fields:** The metadata authoring panel where you can select and edit fields in the record.

**Edit Field:** The metadata authoring panel where you can edit fields in the record.

**Submit to CMR:** Submit the completed record to the Common Metadata Repository (CMR). (Note: Depending on your permissions, you may only be able to submit your metadata record for review.)



## Left-Hand Navigation

### Record

- **Generate Error Report:** Check the metadata record for field content, syntax, verification of controlled keywords, and completeness.
- **Generate Broken Link Report:** Check and identify potential broken links in the metadata record.
- **Download Record:** Save the metadata record locally to the desktop.
- **Save as Template:** Save the metadata record as a template. See the “Working with Templates” section above for more information about templates.

**About docBUILDER:** Indicates the version number of the docBUILDER software users are using.

**Contact Us:** Contact the GCMD user support office for additional help.

## Help Navigation

**docBUILDER Help Guide:** Online documentation to assist users with the docBUILDER tool.

**DIF Writer’s Guide:** Online documentation to familiarize users with the DIF collection metadata format.

## Additional Assistance

If you need additional assistance using docBUILDER, please contact the GCMD user support office at [GSFC-GCMDUSO@mail.nasa.gov](mailto:GSFC-GCMDUSO@mail.nasa.gov).